

CLAIMS:

1. Data communication means for communicating N-bit data, N being an integer with a value of at least three, the data communication means having a plurality of substantially parallel conductors comprising a first, a second and a third conductor for respectively communicating a first, a second and a third bit of the N-bit data, the first conductor having a first distance to the second conductor, and the second conductor having a second distance to the third conductor, the first distance being smaller than the second distance; said first distance being based on a first correlation between the first bit and the second bit and said second distance being based on a second correlation between the second bit and the third bit, characterized in that the first bit is a bit of a data word and the second bit is an encoding bit of a fault-tolerant encoding method for the data word.
2. Data communication means as claimed in claim 1, characterized in that the fault-tolerant encoding method is dual-rail encoding.
- 15 3. Data communication means as claimed in claim 1 or 2, characterized in that the data communication means further comprise a fourth conductor for communicating a fourth bit of the N-bit data word, the fourth conductor having a third distance to the third conductor based on a third correlation between the third bit and the fourth bit.
- 20 4. Electronic device comprising a first module and a second module, characterized in that the first module is coupled to the second module via data communication means according to any of the preceding claims.
- 25 5. Method for designing data communication means for communicating N-bit data, N being an integer with a value of at least three, the data communication means having a plurality of substantially parallel conductors comprising a first, a second and a third conductor for respectively communicating a first, a second and a third bit of the N-bit data, the first conductor having a first distance to the second conductor, and the second conductor having a second distance to the third conductor, the first distance being smaller than the

second distance;

characterized in that the method comprises the steps of:
calculating a first correlation between the first bit and the second bit;
calculating a second correlation between the second bit and the third bit;
determining the first distance based on the first correlation;
determining the second distance based on the second correlation; and
constructing a codebook of the N-bit data for calculating the first correlation
and the second correlation.

10 6. A method as claimed in claim 5, characterized in that the first bit is a bit of a
data word and the second bit is an encoding bit of a fault-tolerant encoding method for the
data word.

15 7. A method as claimed in claim 5 or 6, characterized by further comprising the
step of changing an order of the first conductor, the second conductor and the third conductor
to increase a sum of the first correlation and the second correlation.